

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,215	07/25/2001	John C. Dute	A-70826/RMA	6832
1678	7590	09/21/2004	EXAMINER	
MARSHALL & MELHORN FOUR SEAGATE, EIGHT FLOOR TOLEDO, OH 43604			PEYTON, TAMMARA R	
			ART UNIT	PAPER NUMBER
			2182	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/916,215

Applicant(s)

DUTE ET AL.

Examiner

Tammara R Peyton

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 and 39-52 is/are pending in the application.
- 4a) Of the above claim(s) 33-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 and 39-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/21/01, 4/4/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-32 and 39-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kniess et al., (US 5,790,526).

As per claims 1-5, 17, 22, 25-32, Kniess teaches an adapter circuit (24, 26, 28, or 30) for controlling the direction of data traffic, between a first device (station 10, Fig. 1) and a second device (station 12, Fig.1), over a single I/O line (14, col. 4, lines 42-47) by utilizing the differences of instantaneous source impedance (low or high) of a controlling I/O line during data out and data in modes. (Abstract, cols. 2-8)

Kniess teaches an adapter circuit that controls the direction of data traffic between a first and second station via connected to a bi-directional bus that using the differences of instantaneous source impedance that is changed between a low impedance and a high impedance. It would have been obvious to one of ordinary skill that the controlling of input and output data communication is without the presence of

any additional signaling protocol that identifies a data input phase or a data output phase.

As per claims 6-9, 18, 19, Kniess does not clearly teach wherein a ratio of said high impedance to said low impedance is about or at least 1000:1, 500:1, or 100:1 or between 1000:1 and 10000:1, however, it would have been obvious to one of ordinary skill that the ratio of high/low impedance of Kniess' adapter could be modified to implement a host of other ratios, because doing so would ensure the practicality of Kniess' adapter when implemented in other systems.

As per claims 39 and 44-47, Kniess teaches an adapter for controlling traffic data signals between a first and second device therefore, it would have been obvious to one of ordinary skill that the adapter would ensure data is routed to the proper destination.

As per claims 10-16, 20, 21, 23, 24, 40, and 41, Kniess disclosed in a prior art system the use of a microprocessor and a memory peripheral device and obvious control lines, (Fig. 2b) therefore it would have been obvious that Kniess' adapter could be implemented in other system thereby expanding the flexibility of the adapter.

As per claims 42, 48, and 49-52, Kniess does not teach a data signal and clock signal separation circuit for separation of data-out + clock and data-in at the peripheral device such that it can interface to a standard SPI device or a standard UART at the

peripheral device, which is performed such that it can interface to devices which use Pulse Width Modulation to convey analog values. However, separation circuit and the use of Pulse Width Modulation to convey analog values are well known in the art, thereby making their use obvious to one of ordinary skill.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammara Peyton whose telephone number is (703) 306-5508. The examiner can normally be reached between 6:30 - 4:00 from Monday to Thursday, (I am off every first Friday), and 6:30-3:00 every second Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Gaffin, can be reached on (703) 308-3301. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3718. Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Mailed responses to this action should be sent to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

Art Unit: 2182

Faxes for Official/formal (After Final) communications or for informal or draft communications (please label "PROPOSED" or "DRAFT" or "OFFICIAL") sent to:

(703) 872-9306

Hand-delivered responses should be brought to:

USTPO, 2011 South Clark Place, Customer Window
Crystal Plaza Two, Lobby Room 1B03, Arlington, VA, 22202 Crystal Park II, 2121.

A handwritten signature in black ink, appearing to read 'Tammara Peyton', with a large, stylized flourish at the end.

Tammara Peyton

September 17, 2004